sentry™

Central Marin Sanitation Authority

Early warning toxicity detection in Anaerobic Digestion

Problem Statement

Co-digestion (AD) of municipal primary and WAS when combined with additional organics sourced from local industrial (e.g. food processing, restaurant) sources can offer significant revenue opportunities and increased biogas production.
AD operators safely need to blend these additional organic sources without risking biological imbalance and overloading?

Cost of downtime / imbalance = **$45,000 – $90,000**

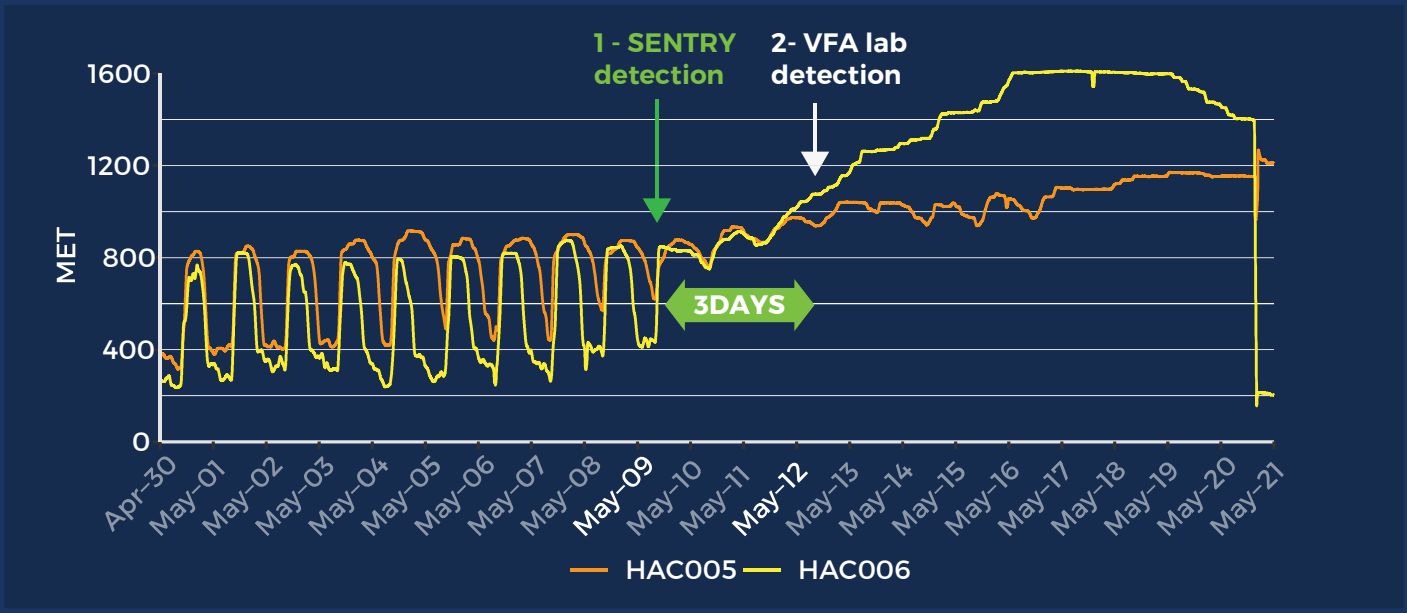
The sentry™ solution

- **Recirculation, in-line installation**
  2 – 3 hours install time
- **Typical maintenance – visual inspection**
  every 3 months
- **Sensors installed in pilot scale and full scale AD systems**

Key Data

1 - SENTRY Detection
Changing organic loading initiated on May 9th (increased FOG organic loading)
SENTRY sensors detect imediate change / imbalance to typical feeding response – notify operations

2 - VFA lab Detection
Delayed response where traditional analysis alert notifies operators (2 and 3 days later in each reactor)



sentry provided:

3-day advanced warning of toxicity

Data of biological proves upset compared to defined traditional parameters

Real time data

Data from biology in AD reactor

Alerts sent to operators when risk of imbalance is detected

Improved system performance

Limiting the negative impacts on biogas production and potential reactor down-time

Potential savings of $45,000 – $90,000

from lost revenue due to system downtime

sentrywatertech.com